MERIDIAN DSP5000 USER MANUAL

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Introduction

Congratulations on choosing DSP5000 digital loudspeakers. We are confident that they will give a quality to your music that is unprecedented, and bring years of listening pleasure. This manual will enable you to get the most from them.

The DSP5000 is a sophisticated product. You should therefore read **all** the supplied documentation before fully installing the DSP5000, particularly if you intend to customise its functions.

We have supplied a **Getting going** sheet for those of you who want to hear the DSP5000s immediately, and then perhaps spend a little longer deciding on how best to set them up in your home.

DSP5000s can be adjusted in many ways, all of which are explained in this manual. If you have any queries regarding the DSP5000, remember that your Meridian dealer has been selected for his expertise. You should refer to him in the first instance.

We have made this unique product as simple to use as possible so that it will bring you a new dimension of listening pleasure.

About this manual

602 A number such as 602 refers to a component in the Meridian 600-Series of audio equipment.

208 A number such as 208 refers to a component in the Meridian 200-Series of audio equipment.

506 A number such as 506 refers to a component in the Meridian 500-Series of audio equipment.

DSP5000 description

You will find it simpler to understand how the DSP5000 works if you consider it as a combination of the following components:

- digital preamplifier, to select and control up to two digital sources directly, and to provide fixed and switched digital output for the other DSP5000
- digital audio processor, whose functions include decoding as well as error detection and correction
- digital signal-processor, dealing with tone controls, digital crossover, dynamic bass control, balance and volume
- two precision digital to analogue $\Delta\Sigma$ converters for bass-mid and tweeter
- remote control for all functions, including volume, balance, mute and various tone controls
- controlling computer
- RS232 control and display capability
- Meridian 500-Series communicator
- Meridian 200- or 600-Series communicator
- 2½-way active loudspeaker, with three drive units and three 75W power amplifiers per speaker

Master and slave speakers

In every room containing DSP5000s, one speaker is chosen (by means of either factory setting or user setup) to be in charge of the other Meridian components in that room. We refer to this as the **master** speaker. It controls the functions of the other DSP5000, and communicates with all the other Meridian products in the system via the M5-lead provided. The master speaker is also the one that 'watches' the remote control, and should therefore be placed so that it has the best possible view of the room, although the connections between the other components of your system must also be considered.

An installation may use 1, 2, 3 or 5 [1] DSP5000s: one will always be the master speaker and the others used as **slaves**.

The master is identified by a red light in the display window.

Centre, left, right and surround

Since the digital audio signal is in stereo format, the DSP5000 needs to be told if it is a centre, or on the left or right. We refer to the DSP5000 which is on the left when viewed from the listening position as the **left** speaker.

If you have more than one Meridian Digital Speaker, the master can be any of the positions. The choices master/slave and position can be made independently – since selecting which is to be master affects the way the cables run in your installation. As supplied, the DSP5000 is set up as a left master, but you can alter this if necessary using a *Type* setting (see page 33) or in *Config* (see page 34).

DSP5000s can be used as surround speakers. In this case they are set to be surround left or right.

---

[1] Three as left, right, centre – five with surrounds.

Control

The DSP5000s are operated either by commands received from the Meridian System Remote (MSR) supplied with the loudspeakers, or by commands received through the communications cables of a Meridian installation (for example, from the front panel of a 562 or 601).

The remote control provides enough keys to allow you to drive a Meridian installation via the DSP5000s, and this is the method to be preferred.

Note If you have any 200-Series components to connect to the DSP5000, then the DSP5000s and any 500-Series components must be operated in 200 mode. See page 30.

Note In a 200-Series system DSP5000 must be set to Type 2 (see page 32) and the MSR must be configured to Option 3 (see MSR User Guide). An MSR not set to Option 3 will give very confusing results in a 200-Series system. In all cases where DSP5000 is used in a system containing 200-Series components the Meridian 209 system handset should not be used.

General background

The DSP5000 contains unique combinations of technology, and you should bear the following in mind.

1. Each DSP5000 is controlled by an internal computer. This interprets the commands from the remote control, communicates with other Meridian components, operates the display and supervises the digital audio process.
2. The DSP5000, in common with other components of the Meridian Multiroom system, uses a technique called ‘source mapping’.

   Source mapping allows flexibility in the following attributes of the source:

   - its identity
   - the associated display
   - which key on the MSR calls the source up
   - which physical input of the DSP5000 receives the signal from this source
   - whether the source is controllable
3. As a convenience feature, the tone-control settings of DSP5000 can be restored to your chosen favourite settings for each source. This means that if you want to keep a combination of tone settings you **must** set these up in the *Setup* mode. See page 31 for an overview.

Unpacking the DSP5000

In the two packs you should find:

- 2 DSP5000 digital active speaker base units complete with grilles
- 8 screw-in spikes with lock nuts and foot caps
- wrench for spikes
- MSR handset and user guide
- battery for handset
- DSP5000 user manual (this manual)
- *Getting going* sheet
- 2 power cords suitable for your territory
- composite system cable M5 (phono + DIN to phono + DIN, 8 metres)
- composite system cable S5 (phono + DIN to phono + DIN, 6 metres)

- hex wrench (3mm), for drive units

If any of these items is missing, please contact your dealer. We suggest that you retain the packing carefully, as it provides maximum protection for the unit in transit.

NOTE Take great care when unpacking or re-packing the DSP5000 that you do not put undue pressure on the front, as the drive units may be damaged if pressed.

Fitting the feet

It is easiest to fit the feet with the speakers upside down, before removing the inner carton or foam packing. Each DSP5000 needs four feet, fitted as follows:

1. Find the eight screw-in spikes, and the lock nuts, foot caps and wrench provided.
2. Fit a lock nut to each spike, about 2mm away from the end of its thread. If a foot is required rather than a spike, fit a foot cap. Screw each foot into the threads on the bottom of the base units. Do not fully tighten the foot at this stage.
3. When all four feet have been fitted, carefully set the DSP5000s upright in their playing positions.
4. Remove the rest of the packaging.

Meridian System Remote (MSR)

The MSR uses infra-red transmission to operate the DSP5000. It uses a PP3 battery (supplied but not installed).

When a key is pressed, an indicating light shows in the window of the MSR. This light becomes inconsistent or weak when the battery needs changing. Normally the battery will last for up to a year, but we recommend that you change the battery routinely every six months, since there are no front-panel controls on the DSP5000 and the system therefore cannot be used without a working handset.

The MSR is supplied with its own user guide. This explains many details of operation and also how to fit and change batteries.

The MSR is suitable for DSP5000 fitted with control EPROM version 2.2 or later. (See page 16). If you want to use MSR with an earlier version of DSP5000 (EPROM version 1.x) or with any 200-Series components in the system, then the MSR needs to be configured to Option 3 – see the MSR User Guide and the DSP5000s have to be set to type 2 – see page 32.

To check the MSR, press any key and look for the flashing yellow light.

Note Good-quality alkaline batteries last longer than other sorts of battery, and we advise you to use one in your MSR.

Note Do not store the unit where it may get too hot.

Note Do not store the unit face down, or rest objects (e.g. magazines) on top of it. Doing so could cause one of the keys to be left pressed down, which would considerably shorten the life of the battery.

Note Do not allow the MSR to become wet. If drinks are accidentally spilt on it, remove the battery and let the MSR dry out. If necessary consult your dealer.

Note Additional MSRs can be obtained from your dealer if you would prefer to have more than one.

Installing your DSP5000

General precautions

Before carrying out any installation, you should ensure that the DSP5000 is marked with the correct voltage for your local AC supply. Should this not be the case, do **not** proceed, but contact your dealer.

As a general rule, you should not make any connections to the DSP5000, or to any other component in your system, when the AC power supply is switched on.

Customising features

For full details of Type *settings and configuring DSP5000, see* ***Customising DSP5000: an overview****, on page 29*

The DSP5000 is very flexible. Its functions can be significantly customised, which means that you can set up your system so that it suits you exactly.

Customising DSP5000: an overview, on page 29, describes your options in detail. By the time you have set up DSP5000 according to your needs, you will be aware of how the alternative choices available to you can differ from the standard configurations.

We recommend that you first get to know the DSP5000 by using one of the standard setups, and by working through this manual. Do not be afraid later to experiment with customising – we have given you a simple way of getting back to where you started from! (see page 32).

DSP5000 as provided has 3 standard configurations which we call Type settings. Each Type gives a different set of standard options; this feature is described fully on page 32.

Warning By selecting a Type, you automatically reset all custom settings for DSP5000 to the factory defaults – this includes all tone settings.

DSP5000 has 7 operating modes (not to be confused with setup Types):

- *Standby*
- *Normal*
- *Type*
- *Config*
- *Setup*
- *Calibrate*
- *Test*

Standby and *Normal* are the everyday operating modes. The basic operating instructions refer to these.

Type is used to reset the DSP5000 to one of five factory-preset conditions. The main uses of *Type* are to specify what type of preamplifier is being used, and to make an initial choice of left/right and master/slave speakers.

Config could be considered as an editing setup mode. In *Config* you can choose any aspect of left/right, master/slave, sources or preamplifiers individually, without losing any other settings you may have made.

Setup is an operating mode in which the speaker plays and in which additional menu items are available. The idea behind *Setup* is that in this mode you can choose and store in memory the preferred tone settings for every source. Going to *Normal* operation then prevents them from being accidentally lost, and can simplify everyday operation.

Customisation is described more fully in **Configuring DSP5000: an overview**, on page 29.

Calibration and *Test* are intended only for use by the factory or by service engineers.

Connections

For details of making all connections, see ***Connecting DSP5000****, on page 42*

You will need to make four types of connection to the DSP5000:

- digital audio
- communications
- master–slave
- AC power

Digital audio connections will need to be made to other components in your system. Communications connections have to be made to most of the other Meridian components in your system in order for them to act as one system. The connections to your DSP5000 are very important, and care should be taken in deciding which connections to make.

Connection details for a wide variety of systems are described in the sections following page 42.

Siting

We recommend that you now set up the system so that you can listen to music and adjust the position of the DSP5000s if necessary. This can be accomplished by following the instructions in the *Getting going* sheet, or those in the rest of this manual.

The locations chosen for a pair of DSP5000s are crucial to getting the best possible acoustic result. For stereo, the two speakers should ideally be equidistant from the main listening position, and the same distance apart.

The DSP5000 has bass controls to allow adjustment of the low-frequency response to room acoustics and positioning. You should nevertheless try to achieve the following:

- If possible, have the most acoustically absorbent wall in the room behind the speakers. They could, for example, be in front of an open bookcase or curtained window, or on each side of a bow window.
- If possible, have each DSP5000 at least 50cm from a corner.
- If possible, have each DSP5000 at least 20cm from the back wall.
- After finding by trial and error the best positions for the DSP5000s, use the spiked feet under the protective black plastic foot caps where possible. This will give improved definition to the sound, and better physical stability.
- If possible, locate the listening position so that your head is at least 60cm from the wall behind you (unless this is acoustically absorbent).

Consider the following practical points:

- If possible, you should locate the DSP5000s so that the electronics (back) of the speaker are not subjected to long-term strong sunshine. In *Standby* the back plates should be cool (less than hand-hot).
- If possible, you should locate the DSP5000s so that the one chosen to be the master speaker does not receive direct sunlight on the front display window. If it does, the DSP5000 may not ‘see’ your commands from the MSR. No harm will be done to the DSP5000; it will simply be inconvenient.
- The location of the master speaker also depends on the connections to it from the rest of your system. See page 42.
- You should not, if possible, locate the DSP5000s with their backs to any heat source – for example, a central heating radiator.
- You should try to arrange a separate AC power outlet for each DSP5000. The use of adapter units is discouraged, since at best they degrade the possible sound quality.

Final adjustments

When you are sure that the DSP5000s are in the right places, you should adjust and finally tighten the feet with the wrench provided.

We strongly suggest that you try to use the spike feet, in order to get the best sound.

- Foot caps may be fitted if the spikes are unacceptable

The spikes allow the DSP5000s to rest firmly on the floor. A spike passes through carpet to the wood or concrete below, and does less damage in the long run than a wide foot.

The best sound possible will only be obtained if the DSP5000s are firmly mounted and cannot rock at all. If the finish of the floor prevents the use of spikes, leave the plastic covers on, but adjust the feet to the floor so that the DSP5000s are vertical and show no tendency to rock.

One or two days after installation, check the tightness of the screws retaining the drivers. These screws may loosen during shipping or with extremes of temperature or humidity, and the speaker will not sound its best if they are loose. The screws should be checked every few months, particularly if the speakers are used to play loud music for long periods.

Tip Like all digital products, the DSP5000 emits some radio-frequency signals. For this reason, try to keep all power cables and communications leads away from audio, TV and FM antennae, and from loudspeaker cables. If you spend some time laying out the cables carefully, you will be rewarded with the best possible performance later.

Starting off with DSP5000

First install the DSP5000s, using the information in the *Getting going* sheet. When they have been used for a while, you may wish to change the setup in order to fine-tune it to your requirements. To achieve this, refer to the setup section of this manual, beginning on page 30.

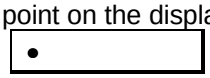
Checking

Before turning on the power, check once again that you have made all the connections correctly and that you have not disturbed any existing connections in the process.

Switching on

The power switch is located directly next to the power inlet on the right-rear of DSP5000.

1. Switch on the power to the sources, but for now do not start them playing.
2. Turn on the power switch at the rear of the master DSP5000. A small point on the display should now be illuminated:

3. Turn on the power switch at the rear of the slave DSP5000. A small point on the display should now be illuminated:

If there are no lights

Check the integrity of your power connections, including any fuses in your supply. If the *Standby* point is still not illuminated and the rest of your system is functioning, contact your dealer for help.

Starting the DSP5000

To start the system, press any of the input keys on the MSR (CD, LP, Radio, Video, Tape 1, and Tape 2). For example:

1. Press **CD**

In Type 1 this will select the physical input D1, and both DSP5000s will display

cd	**65**

65 is the volume number, and **cd** means that the DSP5000 expects the source to be a Meridian CD player which can be controlled by the MSR. **Cd** would be the correct display if your CD player were not a Meridian product, in which case you could still listen to it, but the MSR would not control it.

Note The response of the DSP5000 to commands will be slower if it is set up to expect a Meridian component when one is not connected. If non-Meridian components are used, the DSP5000 should be set up accordingly.

The Meridian components will now have come out of *Standby*.

1. Start up your CD player in the normal way. If all is well you will soon hear the music. If you do not, check all connections, and if necessary refer to the DSP5000 setup manual.

To put the system into *Standby*:

1. Press **Off**

If the connections are correct, both DSP5000s and any other Meridian components should revert to *Standby* mode.

Note If they do not, there may have been a mistake in the setup of the DSP5000s, or in the connection of the communications network.

Standby

The entire Meridian system is designed to be left connected to AC power at all times.

- The *Standby* state ensures that the components operate at maximum efficiency from the moment when you start listening. It is perfectly safe and consumes a negligible amount of power. However, when you are not going to use your system for some time (when you are going on holiday, for instance), we would advise you to disconnect it from the AC power supply.
- The memory functions of DSP5000 use EEPROM, which is non-volatile, and therefore has the ability to store your data indefinitely when the power is switched off.

Basic operation of DSP5000

Note DSP5000 is factory set for the most common installation, one using the full features of a Meridian 500-Series CD player and 562 controller. We call this a Type 1 installation. For more details, see Appendix 1 on page 55.

Selecting sources

To switch from CD to another input, say Radio:

1. Press **Radio**

In Type 1, this will select **RD** on a Meridian 562.

Both DSP5000s display

rd	**65**

Here **rd** means that the source is a radio tuner, and that the DSP5000 expects a Meridian 504 to be connected to the Radio input of the 562 and into the communications system. The 504 can now be controlled by the MSR, and its status can be displayed on the master DSP5000. **65** is the volume number.

The other input keys on the MSR (e.g. LP, Tape 1, Video and Tape 2) operate in a similar way in Type 1:

The LP input of a Meridian 562 is engaged. The D1 input of the DSP5000 is selected. The display shows

LP	**65**

The Tape 1 input of a Meridian 562 is engaged. The D1 input of the DSP5000 is selected. The display shows

t1	**65**

Note These responses are for DSP5000s set up for Type 1, and can be changed. See later.

Selecting a source will bring DSP5000 out of *Standby*.

Note If you have stored a preferred tone setting for a source, you must recall it after switching to the source; recall settings by pressing **Store**.

Putting the DSP5000 in *Standby*

1. Press **Off** on the remote control

Coming out of *Standby*

To start up the DSP5000 from *Standby:*

1. Select a source, using the remote control

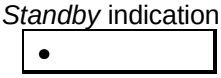
   or

1. If the DSP5000 is part of a Meridian system, bring any component out of *Standby* (for example, start up a Meridian CD player).

Display

DSP5000 displays information to help you operate it. Display information can include:

- master indication – red light in the window
- digital 'overload' – flashing yellow light in the window
- blank display, in which the speaker only illuminates the display when you use the remote control
- *Standby* indication

- setup information during programming
- selected source type
- selected physical input connection
- volume number
- tone control information
- absolute phase
- muted condition
- track and time information, when the source is a digital one that includes these codes, e.g. a CD
- error messages
- CD track selection, if a Meridian CD is connected
- frequency, preset number and preset selection when the installation includes a Meridian tuner

Note Using the **Display** key, you can change the master speaker's display. For example, the slave speaker can display source and volume while the master displays track, time or frequency.

Note Only the master can display tuner, track and time information, as this comes from the products to the master speaker via the M5-lead, and is not passed on to the slave.

Changing the display

The DSP5000 has several display modes. To change the display:

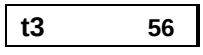
1. Press **Display**

The master DSP5000 will cycle through the five display options, which are:

- source + volume number (convenient legends which you have chosen are displayed)
- blank
- track number for CD; preset number for radio
- track time for CD; frequency for radio
- disc time for CD

The blank display is for those users who are distracted by lights. If you have chosen this option, the lights and display will only come on when you are operating the DSP5000.

The source + volume display looks like the following example:



This indicates that you are using the Tape 3 source with a volume of 56.

CD displays

1. With the CD playing, press **Display**

The display on the master will change to give something like this:

1

Here **1** is the number of the track currently playing on the disc.

If the disc includes significant index points, the display will be like this:

3.4

3.4 here means track 3, index point 4. In theory, with the right disc, we could see displays of track and index up to 99.99. Index point 1 is never displayed.

While the CD player is loading a disc (reading the disc's directory), the DSP5000 will show the directory message:

dir

At the end of a CD, the DSP5000 will detect the lead-out track and momentarily display the message

End

1. With the disc playing, press **Display** again. You will see a disc time display, counting up as the disc plays.
2. Press **Display** again. You now have a display of time for the current track only, also counting up as the disc plays.
3. Press **Display** again. The display should go blank on both master and slave.
4. Pressing **Display** again brings you back to the source and volume display.

One useful way to set up DSP5000s is to leave the track display on the master, since the slave always displays the source and volume.

If the CD player is in the same room, you can adjust its display to give you additional time information.

Try pressing **Display** until you are familiar with its operation.

Other information reviewed in *Standby*

1. Press and hold **Display**

   The display will show the version number of the microcontroller software, followed by the currently-loaded DSP software. For example:

2.2
P1.81
d1.2
441b

Note The last DSP version number will depend on the operating mode of the DSP5000. The first two digits represent the sampling frequency; DSP5000 automatically reloads a new program for each sampling rate. The version numbers will also be different in *Test* and *Calibrate*.

Volume

To raise or lower the volume:

1. Press the upper or lower ∧ or ∨ **red** key

The volume level displayed should count up or down, and will range from 1 to 99. Each step is precisely 1dB.

Note Subjectively one judges a volume increase of 9dB to be equivalent to a doubling of loudness, so each volume number represents about a 11% change in loudness, with nine steps to double loudness.

Mute

To mute the sound:

1. Press **Mute**

The display now shows that the sound is 'attenuated':

Att.

To demute (restore the sound level):

1. Press **Mute**

The **Mute** key toggles between mute and demute.

The system may also be demuted by selecting another source, or adjusting the volume.

The menu system

The DSP5000 offers a number of user choices which are normally accessed less frequently than, for example, source and volume. To make it easier to operate these less commonly used functions, we have provided a flexible menu system to guide you through the options. One important advantage this gives is complete flexibility for future system control options. *Please note:*

- The menus are different in *Normal* and *Setup* modes

To access the menus

1. Use the menu keys on the remote control w n s e

To move between menus

1. Press either the w or the e **menu** key on the remote control

In *Normal* mode, the menu choices are:

- Tilt
- Bass
- Phase
- Balance
- Axis

Tip This is also the way to review settings you have made. The DSP5000 will cycle through its menus, displaying the current choice in each one as it goes.

In *Setup* mode, an additional menu item appears for boundary or free bass alignment or choice of subwoofer modes.

To change the choice in a menu

1. Press either the n or the s **menu** key on the remote control

Balance

The balance control in the speaker is only used if you have two DSP5000s connected as a conventional stereo pair.

If you have set up the DSP5000 as a centre-channel then the balance control is ignored. If the speaker is used with a Meridian 565 Digital Surround Processor, then the balance function is taken over by the 565. See the manual supplied with 565.

Use of balance controls

The use of the balance control has been misunderstood for some time. It has been assumed that you can use it to move the image to one side,

perhaps to compensate for a non-central listening position or a highly asymmetric layout.

This is certainly not the case. Stereo sound is dependent upon time differences between the signals from the channels. To get the best out of a normal stereo system, you should be in the correct position in relation to the speakers.

The balance control of the DSP5000, however, uses digital signal-processing to delay and diminish the sound in one speaker, thus effectively shifting the speaker's image back. Thus balance control compensates, to a certain extent, for an off-centre listening position. If you sit off-axis, this control will rotate the image.

Note Because the use of the balance control processes the digital signal, you may hear a slight clicking as the balance is adjusted.

How to use the balance control in a pair of DSP5000

If you are playing a CD, press **Display** enough times to get the permanent display:

cd	**##**

Here ## represents the volume number. (This will help you to understand the functioning of the balance control better, but it is not essential).

1. Press the w or the e **menu** key until the balance display shows. The master display will momentarily show

L.	**0**

This allows you to ask the DSP5000 what its balance setting is without changing it.

Note We call this kind of display a **cursor** – in this case, the tilt cursor. DSP5000 uses several cursors to access functions such as tilt, bass, phase, track selection and preset selection.

To get rid of a cursor, either

- wait a few seconds, *or*
- select another cursor, *or*
- hit another (inactive) key

To change the balance setting:

1. Make sure that you can see the balance cursor display on the master:

L.	**0**

2. Press the n **menu** key. The display will change to

L.	**1**

showing that you have moved the balance one volume number towards the left. After a few moments the display will revert, but you will now see that the left speaker has a volume number one greater than the right.

3. Press n again. The display will move to

L.	**2**

To move the sound towards the right:

1. Use the **menu** s key instead

The balance can be adjusted between ±30 dBs, incremented in 1 dB steps.

To restore the central condition, press **Clear**.

Note This will also reset the bass and tilt controls.

Tilt control

Tilt controls are combination controls that slope the frequency response of the system slowly over the frequency range to make the sound brighter or dimmer. They are less crude than conventional tone controls. The responses of the tilt control in DSP5000 are shown in Appendix 4 on page 61.

To review the tilt setting:

1. Press the w or the e **menu** key until the tilt display shows. The master display will momentarily show

t.	**0.0**

This allows you to ask the DSP5000 what its tilt setting is without changing it.

Note We call this kind of display a **cursor** – in this case, the tilt cursor. DSP5000 uses several cursors to access functions such as tilt, bass, track selection and preset selection.

To get rid of a cursor, either

- wait a few seconds, *or*
- select another cursor, *or*
- hit another (inactive) key

To change the tilt setting:

1. Make sure that you can see the tilt cursor display on the master:

t.	**0.0**

2. Press the n **menu** key. The display will change to

t.	**0.5**

and the sound will get a little brighter.

3. Press n again. The display will move to

t.	**1.0**

To dim the sound:

1. Use the **menu** s key instead

The tilt can be adjusted between ±10 dBs, incremented in 0.5 dB steps.

To restore the flat condition, press **Clear**.

Note This also restores balance and bass.

To store a tilt setting, you must be in *Setup* mode; see page 39.

To recall a tilt setting, use the **Store** key; see page 24.

Tilt explained

The tilt control allows you to adjust the broad balance of the DSP5000 to correct for the acoustics of your listening room, or for a misbalanced recording.

Normally, settings between 1.0 and –2.0 will give the most natural result.

All DSP5000s in the installation take on the same tilt setting as the master. This is essential for correct stereo.

Bass control

The bass control allows you to adjust the bass response in the room. The responses of the bass control in DSP5000 are shown in Appendix 4 on page 61.

To adjust the bass:

1. Press the w or e **menu** key until the bass cursor display shows. The master display will momentarily show

   b. 0.0

This allows you to ask the DSP5000 what its bass setting is without changing it.

To change the bass:

1. Make sure that you can see the bass cursor display on the master.
2. Press the n **menu** key. The display will change to

   b. 0.5

and the bass will increase by 0.5dB. The bass can be adjusted by ±5 dB, incremented in 0.5 dB steps.

To restore the flat condition:

1. Press **Clear**

Note This also restores balance and tilt.

- To store a bass setting, you must be in *Setup* mode; see pages 39 and 23
- To recall a bass setting, use the **Store** key; see page 24

Bass explained

The bass control allows you to adjust the broad balance of the DSP5000 to correct for the acoustics of your listening room, or for a misbalanced recording. Normally, settings between 1.0 and –2.0 will give the most natural result.

All DSP5000s in the installation take on the same bass setting as the master. This is essential for correct stereo.

Phase

You can invert the absolute phase of the signal. To review the absolute phase:

1. Press the w or e **menu** key until the phase display shows. The master display will momentarily show

   POS.

   or this:

   nEG.

This allows you to ask the DSP5000 what its phase setting is without changing it.

To change the absolute phase

1. Press the n or s **menu** key

Phase explained

The **phase** function controls the absolute phase of the digital conversion and is used to compensate for recordings which are out of phase.

Experiment with the sound of the setting. If you are not sure, set it to positive phase.

Axis

To adjust the axis:

1. Press the w or e **menu** key until the axis cursor display shows. The master display will momentarily show

A.	**0**

This allows you to ask the DSP5000 what its axis setting is without changing it.

To change the axis:

1. Make sure that you can see the axis cursor display on the master:

A.	**0**

2. Press either the n or s **menu** key. For example, if you press ↑ the display will change to

A.	**1**

All DSP5000s in the installation take on the same axis setting as the master. This is essential for correct stereo.

Axis explained

The axis control allows you to adjust the optimum listening height of the DSP5000 speakers. This means that you should be able to use the axis function to bring the image more clearly into focus for different listening heights. It changes the focus of the stereo image, not its perceived position. You could think of it as a balance control operating in the vertical plane.

The axis can be adjusted between 3 and –2, covering a range of listening positions from standing eight feet from the speakers to sitting on the floor at the same distance. Nominally 0 corresponds to on-tweeter-axis listening; usually a listener will be below that position, so we recommend that you start with –1 or –2.

Storing settings

In *Setup* mode you can store settings for:

- tilt – overall frequency balance
- bass
- boundary alignment (wall or free-standing)
- phase
- axis

An unusual feature of DSP5000 is that the tone control settings for tilt and bass can be stored separately for each source. If, for example, you happen to prefer a tilt setting only when listening to the video source, use *Setup* to programme the DSP5000 for that setting. You can then recall the setting by pressing **Store** while listening to the video source in *Normal* mode.

At any time, you can use the **Clear** key to restore the following factory settings :

- bass to 0.0
- tilt to 0.0
- balance to middle

You cannot store settings in *Normal* mode. See page 41.

Recalling settings

The settings stored in the DSP5000 can be recalled at any time. When the display is normal (i.e. not a tone cursor):

1. Press **Store**

The DSP5000 will respond with

rEc.

Tip You can now compare the stored settings with the standard ones. Use the **Clear** key to restore a flat response, then **Store** to recall the stored settings.

Note When you change sources, you will need to press **Store** to recall any favourite tone setting you may have stored.

Note Clear does not reset the phase and axis settings.

Controlling a Meridian CD player

Use of handset to control CD

You are advised to operate the system with the MSR.

Playing a disc

On the MSR, the following keys operate the Meridian CD:

To start a disc

1. Press **Play**

To stop the disc

1. Press **Stop**

To make the disc pause

1. Press **Pause**

The Pause indication on the Meridian CD will light up. If the DSP5000 master was displaying track or time information, it will display

PSE

To start it again (‘unpause’)

1. Press **Pause**

To cause a disc to repeat

1. Press **Repeat**

The Repeat light on the CD player will light up.

Scanning a disc

To move forward or backward in a track

1. Press u or v

Selecting tracks

To move on to the next track at any time

1. Press **Play**

or

Next and **Previous** can be used – as on the Meridian CD front panel – to select a track number. This will result in the appearance of the ‘select cursor’ display. For example

1. Press **Next** repeatedly until you see the 'select track 5' display. In 500 mode the display looks like:

– 5

   In 200 mode the display looks like:

S. 5

You can now either engage Track 5 by pressing **Play**, or simply wait for the track to engage.

The DSP5000 directs instructions from the MSR to the current source.

Note When selecting tracks by number, you do not need to worry about Track and Preset buttons, as you do with the Meridian 209 remote control.

To select a track by number, press the appropriate number key or keys. For example, to select track 6

1. Press **6**

The DSP5000 will respond with the display

– 6

To engage this selection, press **Play** or wait for a short time.

To select track 15

1. Press **1** followed by **5**

The DSP5000 will show

– 15

Again, press **Play** or wait for a short time.

If you select a track that does not exist on the disc, the DSP5000 will show an error message:

Err.

Selecting index points

To select index points you need to enter both the track and index point by number. Press the appropriate number key or keys, followed by the decimal point key, followed by the index number. For example, to select track 6 index 2

1. Press **6**

The DSP5000 will respond with the display

– 6

2. Press decimal point ●**, then**
3. Press **2**

The DSP5000 will respond with the display

– 6.2

To engage this selection, press **Play** or wait for a short time.

Setting up programmed sequences

To set up a sequence use the number keys with the **Store** and **Clear** keys – as described in the CD player User Guide.

For example to store track 6:

1. Press **6**

The DSP5000 will respond with the display

– 6

2. Press **Store**

The DSP5000 will respond with the display

S. 6

For example to cancel track 4:

1. Press **4**

The DSP5000 will respond with the display

– 4

2. Press **Cancel**

The DSP5000 will respond with the display

C.	6

Press **Play** to action a programmed sequence.

Use with 504, 204 or 604 FM tuner

When a 204 or 604 is the system tuner, it can be controlled by the MSR but only if the DSP5000s are set up in 200 mode (for example by selecting Type 2. A 504 tuner can operate in both 200 and 500 modes.

Select the tuner with **Radio**. The display will show

rd.	##

where ## is the volume number. (If you are using another tuner which the DSP5000 cannot control, see the setup section on page 38, select Comms to 'N.C.')

To select a preset station, e.g. preset 4

1. Press **4**

The DSP5000 will show a 'select cursor' display. For 500 mode the display is:

P.	4

For 200 mode the display is:

S.	4

2. Either press **Play** or wait for a short time. The tuner will go to preset number 4.

To select a higher preset, e.g. 23

1. Press **2** followed by **3**

The DSP5000 will display

P.	23

and then the tuner will go to preset 23.

The master DSP5000 can display either the preset number of the tuned station or its frequency. For example, if we tune to 92.3MHz and store this frequency as preset number 3, we can then press **Display** repeatedly and watch the master rotate its display between the following:

rd	##
P.	3
	92.3

Note The DSP5000 cannot show the time displays of the 204.

6. Use the system, or put it into *Standby*.

Operation summary

On the remote control

KEY	FUNCTION
Off	Puts the DSP5000 into *Standby* mode
CD, LP etc.	Selects a source to listen to
Display	Cycles the display through: source and volume number blank (display off) preset on tuner; track on CD frequency on tuner; disc time on CD track time on CD
Play (green)	Starts a CD playing; moves CD to the next track; moves tuner to the next preset
Stop	Stops a CD playing
Pause	Makes the CD pause
Repeat	Sets or clears Repeat on the CD player
Next	For track or preset selection
Previous	For track or preset selection
w e (menu**)**	Move between menus; can be used to review settings
n s (menu**)**	Change items within a menu
*****	Reserved
Clear	Restores factory tone settings
Store	Recalls tone settings for the current source
Mute	Mutes or demutes the system
n (red)	Increases volume
s (red)	Decreases volume

Customising DSP5000: an overview

DSP5000 is a very sophisticated device, with a number of options which allow you to set up exactly the system you need.

Programming of DSP5000s should take place **after** you have set up the speakers and sorted out most of the connections. If you first get the speakers working with some kind of digital input (e.g. a CD player), and with some of the programming provided (e.g. Type 1), then you can always go back to that starting point if you make a mistake.

Programming DSP5000 is a straightforward process, and you should not be timid about experimenting. Although the setup is stored in non-volatile memory called EEPROM, the EPROM (which you cannot change) contains default Type settings, and you can return to these at any time.

Programming is the process of telling the DSP5000 what you want it to do when the MSR is used. It is based round the Type system, which has five different Types; you can choose the best Type for your own system. Programming is carried out using the MSR, so you must first get the MSR working, following the instructions on page 8.

The first step in programming DSP5000s is selection of the start Type. Page 30 gives an overview of the five different Types, and these are described further in Appendix 1, on page 55.

Note At any time during your programming of the DSP5000s, you can turn off the power to the speaker you are working on, and all that you have done will be remembered.

Note When you have finished programming, you can get out of the programming mode simply by turning the power to the speaker off and turning it back on again.

Restoring default settings

1. Switch off the DSP5000, using the power switch on the back, and wait for 3 seconds
2. While pressing the **1** key on the remote control, switch the power on again. The display will read

TY. 1

3. Release the **1** key
4. At this stage, you can change the Type from 1 to 8, using the number keys; see details on page 32
5. Switch off the DSP5000, using the power switch on the back
6. After a second, switch the DSP5000's power on again

Storing preferred tone settings

There is a special mode called *Setup* in which you can listen to the loudspeakers normally, but in which the Memory feature is extended to allow you to store tone settings as well as recall them. See page 23.

Note It is an unusual feature of DSP5000 that the speaker stores your preferred tone settings for every source. You must therefore adjust these settings one at a time and store each one.

How to customise DSP5000

DSP5000 needs no customising to become operational. Once you have your system established, you may wish to review the customising options by reading **Customising DSP5000: an overview** (page 29).

Customising: general procedure

DSP5000 has seven operating modes (not to be confused with Types):

- *Standby*
- *Normal*
- *Type*
- *Config*
- *Setup*
- *Calibrate*
- *Test*

Standby and *Normal* are the everyday operating modes. The basic operating instructions refer to these.

When customising, you may need to use *Type, Config* and *Setup,* in that order, before reverting to *Normal*. In other cases, you may only need to use *Config* or *Setup*. Neither of these modes resets the DSP5000, so you will not necessarily lose any settings you have previously made.

How to change back to *Normal*

To revert to *Normal*

1. Switch off the DSP5000, using the power switch on the back
2. After a second, switch the DSP5000's power on again

Note If you are in *Calibrate* or *Test* mode, refer to page 60 or 59.

Type: an overview

The Type *settings are described in detail in Appendix 1, on page 55*

Type restores one of the default settings. Other than selecting master/slave and left/right/centre/surround, no further actions are possible. *Type* always resets all stored settings, with the exception of calibration information. The DSP5000 does not play music in *Type*.

For example, Type 1 setup gives:

- 500 Series system only
- All sources select the D1 input
- DSP5000 expects a Meridian 500-Series CD and/or a controller such as 562

For example, Type 2 setup gives:

- 200/600 Series system only
- CD selects the D1 input
- all other sources select the D2 input
- DSP5000 expects a Meridian CD preamp controller such as 208

Config: an overview

To use Config*, see page 33*

Config could be considered as an editing setup mode. In *Config* you can make individual choices about any aspect of left/right, master/slave, sources and preamplifiers without losing any other settings you may have made. In this mode, the DSP5000 is muted while you make the necessary choices. The choices available in *Config* are outlined in the following sections.

Config: control settings

In *Config*, you can make selections that affect the way in which DSP5000 responds to certain keys. The main choices of this kind are:

- left or right
- master or slave
- Multiroom standby option
- sort of preamplifier or source switch box in the installation

Config: sources and inputs

In *Config* you can make decisions about sources, e.g.

- how many inputs (up to six) will be active
- which sources you can select
- which key on the remote control selects which source
- which logo on the DSP5000 display represents which input
- which physical input connection to DSP5000 will be used

Setup: an overview

To use Setup*, see page 39*

Setup mode is quite different from *Type* or *Config* in that the speakers function in this mode. In *Setup,* the master speaker menus are extended to give you additional control, so that you can establish sonic preferences.

Setup mode lets you make choices based on extended listening.

The idea behind *Setup* is that you can choose, while listening,

- the boundary parameter (free or wall-mount)
- tilt settings for each source
- bass settings for each source

When you are happy with the settings you have chosen, they can be stored in *Setup*. You then switch the system back to *Normal*.

The particular advantage of this system is that other users will not inadvertently lose the settings you have chosen. When the system is in *Normal* mode, the **Store** key will not store, performing only a recall function. At any time you can

- reset factory default settings, using the Reset key
- adjust the settings, using the Menu keys
- recall your preferred tone settings with the **Store** key

Customising using *Type*

Type is a mode used specifically to restore the entire memory (except the calibration memory) of DSP5000 to one of three factory-preset configurations. For all three Types*, Type* resets the following:

- phase to positive
- axis to –1
- balance to central (L 0)
- tilt to 0.0
- bass to 0.0
- boundary to Free
- speaker to left master

Depending on the Type selected, the other options are set as follows. More information is given in Appendix 1, on page 55.

Type	Application	D1 input for source	D2 input for source
1	500 mode, controller like 562	all	na
2	208 mode, with other Meridian equipment in the system	CD	others
3	201/601 mode, with other Meridian equipment in the system	all	na
4	201/601 mode, with other Meridian equipment in the system	CD	others
5	500 mode, CD direct	CD	others
6	500 mode, Meridian Digital Theatre	all	na
7	500 mode, Second room system	all	na
8	500 mode, Additional room system	all	na

When programming DSP5000 speakers, it is best to choose one of the three standard Types as a starting point, and it may be possible to find one that meets your needs exactly. Otherwise, choose the one that is closest to your requirements. Select it, and set up the master/slave and left/right speakers, by means of the following steps:

Selecting *Types*

1. Switch off the DSP5000, using the power switch on the back, and wait for 3 seconds
2. While pressing the **1** key (**2** for Type 2, **5** for Type 5) on the remote control, switch the power on again. The display will read

   TY. #

where # is the Type you have selected.

3. Release the # key

After a couple of seconds, the display will change to

L.

This indicates that this speaker will be a left master.

Choosing centre, left or right

If you have *Typed* the speaker with a 6, then the 'Cen.y' option is enabled. This tells the speaker that there is a centre in the system and enables the option to make the DSP5000 into a centre.

If you *Typed* the speaker with a number other than 6 then the 'Cen.n' option is selected and you do not get the 'centre' choice in this section.

To change the speaker from left to right, or vice versa.

1. Press the **menu n** or **s** on the remote control

The choices offered are L, r, C, LS, RS (for left and right surround).

Choosing master or slave

To change a master to a slave, or back again:

1. Press **Play** on the remote control

r.	**S.**

This display indicates a right slave.

Completing *Type*

When you are happy with your left/right and master/slave choices for this speaker:

1. Switch off the DSP5000, using the power switch on the back
2. After a second, switch the DSP5000's power on again

Note Ensure that you have set the two speakers to opposite settings. One must be left, the other right; similarly one must be the master and the other a slave.

3. Make a note of your choices by marking both speakers on the back, in the area provided on the label. Use a pencil so that you can change the marking in future.

You now have your speakers set up in the start Type of your choice. The following sections explain how to modify this setting to fine-tune the system.

Note Under normal circumstances, you should not switch on the DSP5000s while any key on the MSR is being pressed. If you do this, you may accidentally select a new Type and change any previous programming.

The Types are summarised in Appendix 1.

Customising using *Config*

For an overview of Config*, see page 30*

Config is a fine-tuning customising process carried out only on the master. It will not cause any difficulty if you accidentally go to *Config* for a slave, since the only options offered there will be left/right and master/slave.

In *Config* you can make choices about the way in which your system responds to source-key selections. The important feature of *Config* (differentiating it from *Type*) is that you can use it to change any setting of the DSP5000 without erasing all the other setup choices you may have made. Think of it as a configuration editor.

Config has three sorts of menu:

- root menu
- system menu
- source menus

Inside *Config* you can move between them at will. To go to

1. root: press **Clear**
2. system: press **Off**
3. source: press a source key – e.g. **CD**

Note In *Config*, the speaker is silenced.

How to use *Config*

1. Switch off the master DSP5000, using the power switch on the back, and wait for 3 seconds
2. While pressing the **0** key on the remote control, switch the power on again. The display will indicate the root menu that shows the left/right and master/slave settings; for example,

   r.

indicates a right master.

3. Release the **0** key

Root menu options

The root menu controls the overall operation of the DSP5000s, with options for master/slave and left/right.

You get to the root menu by

1. Selecting *Config*, as above

   or, at any stage in the *Config* programming process,

1. Pressing **Clear** or **Off**

Choosing left or right

To change a left speaker into a right speaker, or vice versa:

1. Press **n** or **s** on the remote control

Note If you have started with *Type* 6 or selected 'CEn.Y' elsewhere in *Config*, then you also have the choices 'C' and 'S' for Centre and Subwoofer. If you want the speaker to be a Centre in a 565-based system, choose 'C'.[1]

Choosing master or slave

To change a master to a slave, or back again:

1. Press **Play** on the remote control

   r. S.

This display indicates a right slave.

System menu

To get into the system menu:

1. Press the **menu e** key

Preamplifier options

The first digit in the system menu identifies the dominant preamplifier in the system.

---

[1] This choice also permits you to make the DSP5000 the system subwoofer. This choice would normally be made only for diagnosis!

The display looks like this:

Cd ??

The first letters tell you which options are available to you, as follows:

- **500** tells you that this system operates in Meridian 500-Series mode. All controllable Meridian products must be 500 compatible. Also use this if the DSP5000 is the only controllable preamplifier connected (i.e. the source keys on the MSR will only select between the two inputs of the DSP5000).
- **Pr.** means that the preamplifier for this system will be a Meridian 201, 601, 603 or compatible**,** and that source keys on the MSR will automatically switch the inputs on the preamplifier regardless of other selections. Implies and engages 200 mode.
- **Cd** means that the preamplifier for this system will be a Meridian CD/Pre (e.g. a 207 or 208). The first four input keys (CD, Radio, LP and Tape1) on the MSR will automatically switch the inputs on the CD/Pre regardless of other selections. Input keys Tape2 and Video will select CD on the CD/Pre. Implies 200 mode.

To move through these options:

1. Press **n or s** (menu keys)

Configuring options

This sections allows you to make choices about whether the speaker will be system controller. This choice is only relevant to the master.

After a *Type* the display shows:

Auto

Choose from:

- **Auto** This preferred option allows the system to 'Auto Configure'.
- **N.Con** Sets the speaker to be 'Not Controller' if it is a Master.
- **Con** Sets the speaker to be 'Controller' if it is a Master.

System address

1. Press the **menu e** key

The display typically shows:

S.A. 1

This means the system address is 1. The 500 Comms allows for up to eight systems connected to the same bus for multiroom installations. Unless specifically instructed otherwise by Meridian personnel; or your dealer, leave this set to 1.

Product address

1. Press the **menu e** key

The display typically shows:

P.A. 1

This means the system address is 1. The 500 Comms allows for up to eight systems connected to the same bus for multiroom installations. Unless specifically instructed otherwise by Meridian personnel; or your dealer, leave this set to 1.

System protocols

Multiroom systems have protocols which allow you to define the extent to which any room can interfere with the main system. You can choose to

have the DSP5000 ignore the *Standby* state of the associated preamplifier, looking after its own *Standby* independently. To select this mode while in the system menu:

1. Press **Fn - Record**

The display should indicate 'preamplifier off' like this:

?? P.

Toggle this choice with **Fn - Record**.

Setting the Volume mode

1. Press the **menu e** key

LE. 1

In the 500 Comms system there is provision for two volume controls, main and secondary.

2. Use the ▲ and ▼ **menu** keys to choose between:
   - 1. Volume main means that the DSP5000 volume control will follow the main system and respond to the red keys on the remote. Shifted (secondary) volume commands will be passed on to another product.
   - 2. Volume secondary means that the internal volume control will follow the second volume control in the system and respond to the shifted volume command on the remote.
   - 3. Volume is handled in the speaker independently of other products on the Comms.

Options 2 and 3 are for Multiroom installations. If in doubt select 1.

Surround system options

Balance control operation

Installations including the Meridian 565 Digital Surround Processor normally release the system balance function to 565.

1. Press the **menu e** key

The display should indicate the balance control status:

bAL. y

Toggle this choice with the ▲ and ▼ **menu** keys.

Choose ‘n’ if you have a 565, ‘y’ otherwise.

DSP Centre channel exists?

This choice tells the master that a Meridian DSP Centre speaker will be in use as a centre-channel on the system.

1. Press the **menu e** key

The display should indicate the centre status:

CEn. y

Toggle this choice with the ▲ and ▼ **menu** keys.

Choose ‘y’ if you are using a DSP speaker with centre-channel features as a centre.

Source menus

The source menus are used to change what happens when you press a key on the MSR (i.e. what the DSP5000 then displays, and which input it selects).

These parameters are already set up by the Type chosen as the start Type, but they can be adjusted using the following menus.

Source menu 1 options

Source menu 1 controls the display that will be seen on the DSP5000 when a key on the MSR is pressed in normal use. Think of its function as adapting the keypad to your needs. There are a large number of available legends.

To get into source menu 1

1. Press the source key you want to define, e.g. **CD**

   or

1. When in source menu 2, press the **menu** w key on the remote control.

The 'source menu 1' display looks like this:

cd. cd

The first cd indicates the MSR key being defined, and the second indicates the display that will result after pressing this key. Display options include the following:

cd

This means that the source selected will be a Meridian CD player. Depending on the Comms setting (see page 38), DSP5000 will try to control the CD player in normal use for such functions as Play, Stop, and track selection; also the DSP5000 will look for and check subcode in a digital input.

rd

This means that the source is a Meridian FM tuner. (See page 38)

LP

This means that the source is a turntable.

dt

This means that the source is a digital tape recorder.

SA

This indicates a satellite audio source.

t#

The Tape 1, 2, 3 and 4 displays have no special meaning.

n

This final option causes the source key to select a non-existent source. By using this option, you can prevent the selection of unused inputs to the installation.

Use the **menu** n and s menu keys to adjust the second part of the display.

Note The choice of display/input type is completely independent of the MSR key to which it is assigned. If it suits your purpose you can make several sources non-existent, or several ‘phantoms’ of the same type, e.g. CD = ‘rd’ and Radio = ‘rd’.

Source menu 2 options

Source menu 2 is used to define which DSP5000 input will be selected for any given source key on the MSR.

You get to source menu 2 by using the **menu** e key while in source menu 1.

The display will be like this:

cd	**d1**

The first part of the display tells you which key on the MSR you are setting up. The second part of the display tells you which input on the back panel of the master DSP5000 will be selected when this key is pressed. The choices are:

d1

Input **D1** selected

d2

Input **D2** selected

Use the n and s **menu** keys to select the second part of the display.

Source menu 3 options

Source menu 3 is used to define the control or communication type for any given source key on the MSR.

You get to source menu 3 by using the **menu** e key while in source menu 1.

The display will be like this:

cd	**1C**

The first part of the display tells you which key on the MSR you are setting up. The second part of the display tells you which Comms type has been selected. The choices are:

1C

In 500 or 200 mode this tells the DSP5000 that the source is a controllable Meridian CD player/transport.

2C

In 500 or 200 mode this tells the DSP5000 that the source is a controllable Meridian tuner.

3C

For 200 mode only, this tells the DSP5000 that the source is a Meridian 232 Multiroom translator.

4C

For 200 mode only, this tells the DSP5000 that the source is a Meridian 232 controlling a CD changer.

5C

In 500 or 200 mode this tells the DSP5000 that the source is like a Laserdisc player. Some laserdiscs carry digital subcode (chapter, time etc.) that can be displayed by the speaker.[2]

Use the n and s **menu** keys to select the second part of the display.

Source menu 4 options

Source menu 4 is used only in 500 mode, and to define the Comms address of the source product.

---

[2] You can also use this option to allow time-code to be displayed from a non-Meridian CD player if you also have a Meridian CD player connected.

You get to source menu 4 by using the **menu** e key while in source menu 1.

The display will be like this:

cd 1A

The first part of the display tells you which key on the MSR you are setting up. The second part of the display tells you the address. Normally you should leave this set to '1A' unless advised otherwise by your dealer or Meridian technical support.

Use the n and s **menu** keys to select the second part of the display.

Completing *Config*

When you are happy with your left/right and master/slave choices, and with your other choices for this speaker:

1. Switch off the DSP5000, using the power switch on the back
2. After a second, switch the DSP5000's power on again

Note Ensure that you have set the two speakers to opposite settings. One must be left, the other right; similarly, one must be the master and the other a slave.

3. Make a note of your choices by marking both speakers on the back in the area provided on the label. Use a pencil so that you can change the marking in future.

Note When customisation is complete, switch the power off, wait for 3 seconds, then switch it on again to restore *Normal* operation and to save what you have done.

Customising using *Setup*

For an overview of Setup*, see page 31*

Features of *Setup*

Setup provides additional functions:

- Choice of wall alignment for the low-frequency response of the speaker
- The **Store** key takes on a 'Store' capability
- Access to DSP Centre-channel features.

How to use *Setup*

Note It is not necessary to make any adjustments to the slave for *Setup*.

1. Switch off the master DSP5000, using the power switch on the back, and wait for 3 seconds
2. While pressing the **Store** key on the remote control, switch the power on again. The display will momentarily show

SEt

3. Release the **Store** key

The master will revert to the *Standby* display and condition. You may now use the speakers normally.

When customisation is complete and you are sure that you have stored the correct tone settings **independently for every source you wish to change**:

1. Switch the power off and then on again to restore *Normal* operation

In *Normal* operation, the settings you have made will be retained and cannot be changed without going back to *Setup*.

Boundary controls

The frequency balance of a loudspeaker is changed, particularly in the low-frequency regions, according to its proximity to walls or boundaries. The DSP5000 is designed as a floor-standing system, so one boundary – the floor – is nominally fixed. The DSP5000's response is also optimised for a rear air-space of about 30cm behind the cabinet.

In certain circumstances, it will not be possible to pull the loudspeakers out into the room, and they will have to stand with their backs to the wall.

DSP5000 has adequate DSP power to correct for the gross effects of 'wall-mounting'. Of course, no signal-processing will remove the more rapid echo from a nearer boundary, and such reflections will to some extent disturb the depth of the stereo image.

In *Setup,* new menu entries appear, which allow a listening choice between boundary-position settings and these can be made independently for a left–right pair (or left + right + surrounds) and for a centre.

Using the system boundary control for a left-right pair

This menu will appear on any master DSP5000 which is in *Setup* – even if it is a centre channel and even if there is no left or right DSP speaker.

Note When DSP5000 is a master this menu operates the boundary settings for any DSP5000 or DSP5000C in the system which is configured to be left or right. D6000 ignores this menu.

To change the system boundary setting:

1. Press the w or e **menu** key until the wall cursor display shows. The master display will momentarily show

   FrEE

This allows you to ask the DSP5000 what its wall setting is without changing it.

To change the setting:

1. Make sure that you can see the wall cursor display on the master:

   FrEE

2. Press either the n or s **menu** key. The display will change to

   boun.

and the sound will change in balance.

3. Press either the n or s **menu** key. The display will change to

   Corn.

and the sound will change in balance. This setting may be better for corner or under-TV positions

In this menu you are also offered two choices for use with associated subwoofers:

Sub.1
Sub.2

Centre-channel options

The following two adjustments will appear on the master if the 'Cen.y' option is selected in *Config* or if the speaker has been set to *Type* 6. It appears on the master – whether or not it is a centre. A DSP5000C (or DSP5000) which is configured as a centre responds to these menu settings.

Using the centre boundary control

The centre boundary control is like the system boundary control, but it can be operated independently of other speakers in the system.

To change the centre boundary setting:

1. Press the w or e **menu** key until the centre boundary display shows. The master display will momentarily show the centre equivalent of the system 'FrEE' setting:

C.FrE.

2. Press either the n or s **menu** key. Choose from:

   C.bou. equivalent to the system 'boun.' setting.

   C.Sb1 equivalent to the system 'Sub.1' setting

   C.Sb2 equivalent to the system 'Sub.2' setting

   C.Cor. equivalent to the system 'Corn.' setting.

Using the centre tilt-offset control

The centre tilt-offset allows the centre to be permanently dimmer or brighter in balance to the other speakers (or 565 decoder outputs) in a system. It is intended to help you match the sound of the centre to the left and right main pair.

To change the centre tilt-offset:

1. Press the w or e **menu** key until the centre tilt-offset display shows. The master display will momentarily show

C.t. **0**

2. Press either the n or s **menu** key.

While listening to the system make a choice between ±9dB. A normal choice should be in the range ±3dB. For further details of using this setting in a surround system, see the Meridian 565 user manual.

Note When customisation is complete, switch the power off, wait for 3 seconds, then switch it on again to restore normal operation and to save what you have done.

Storing settings

To store the current settings, get into a bass, tilt, axis or phase cursor by

1. Pressing the w or e **menu** key until a cursor display appears
2. While this display is up, pressing **Store**

Sto.

The DSP5000 will respond with the store message

Recalling settings in *Setup*

The **Store** key operates normally as a recall when there is no tone cursor displayed.

1. Wait for a volume, track or time display on the master
2. Press **Store**

Limitations of storing

Tilt and bass settings are stored by **each source independently**. Phase, axis and boundary settings are stored for all sources, and the last setting stored is that used for all sources.

Centre-channel options

Using the centre position control

To change the centre position setting:

1. Press the w or e **menu** key until the centre position display shows. The master display will momentarily show

C.P. 1

2. Press either the n or s **menu** key. Choose a setting 1–4 following the guidelines in the handbook for the Centre speaker.

Using the centre tilt-offset control

To change the centre tilt offset:

1. Press the w or e **menu** key until the centre tilt-offset display shows. The master display will momentarily show

C.t. 0

2. Press either the n or s **menu** key. Choose a setting following the guidelines in the handbook for the Centre speaker.

Note When customisation is complete, switch the power off, wait for 3 seconds, then switch it on again to restore normal operation and to save what you have done.

Connecting DSP5000

Four types of connection must be made to the DSP5000:

- power (see page 12)
- digital audio (see page 45)
- communications (see page 46)
- RS232 to a computer (see page 48)

You will need to plan the connections with the installation you wish to achieve in mind. It is best to do this while deciding where to put the DSP5000s, as this decision may affect the positioning of the rest of your system, and the way in which you connect it. The decision as to which speaker should be master is also dependent on both positioning and connections.

The following sections will explain in detail the options open to you. Remember that your Meridian dealer is chosen for his expertise in this area. If in doubt, you can always refer to him.

Connectors

The connection sockets on the back panel of the DSP5000, and their uses, are as follows:

- **Comms Output** A DIN connector which is used to send information on to the DSP5000 slave or to a 565 Digital Surround Decoder.

NEVER connect an audio DIN lead to this socket.

- **Comms Input** A DIN connector which is used to exchange information with other Meridian components

NEVER connect an audio DIN lead to this socket.

- **D1** The first digital input, using a coaxial cable
- **D2** The second digital input, using a coaxial cable
- **D OUT** A digital output which is selected by the DSP5000 to pass on a signal to the other DSP5000. This means that the slave only needs to have one digital input connected.
- **AC** The lower panel contains the power supply, and should already be adjusted for your local supply voltage – check the labelling. The panel contains a 3-pin IEC power inlet plug, with a power switch and integral fuse holder.
- **RS232** A standard serial connection for a computer

Where to put the master

The master has more connections made to it than the slave has, since it is the speaker which is directly connected to any other Meridian products in the system (for example, a 602, 603, or 607, or any Multiroom components). It is therefore sensible to put it closer than the slave to the sources, for the sake of tidiness. You should now be able to decide where the master will be, and whether it will be a left or a right speaker.

Routing cables

Do not route the DSP5000 cables any nearer to TV or radio antenna cables than is necessary. Try to keep any excess cable lengths coiled up, as far from any tuner or television receiver as possible.

Where possible, use a dedicated AC power outlet for each DSP5000. In any case, try not to use the same outlet group for any tuner or TV.

DSP5000 is a digital audio product, and its use involves distributing digital audio signals. This is a new field, and it is important to follow our instructions. Incorrect distribution of digital audio could lead to radio interference, noticeable errors, or unnecessarily reduced sound quality. Correct distribution will give you the best sound it is possible to have. You may be able to use the cables we supply.

AC connection

Before connecting any unit to the AC supply, check that it is adjusted to the correct voltage for your supply.

IMPORTANT: DO NOT MAKE CONNECTIONS OR INSERT OR REMOVE PLUGS WHILE THE UNIT IS CONNECTED TO THE AC SUPPLY AND SWITCHED ON.

1. Connect the unit to the AC power supply with the cord provided

- Each DSP5000 should be connected to an approved AC outlet, using the cord provided
- If at all possible, adapter or extension accessories should not be used, even if they are of an approved type

- If a power-line filter is to be used, try to use a permanent type, and be sure that it is approved to the standards of your territory and that it retains the grounding

WARNING: DSP5000 **must** be grounded.

Connection using M5- and S5-leads

Many systems will require only the supplied composite M5- and S5-leads. If these are not appropriate, further information can be found in the section starting on page 46.

To get a CD player working with the DSP5000s, proceed as follows:

1. Locate the cable marked with ‘S5’. This is a DIN + Phono to DIN + Phono lead, about 6m long.
2. Connect one DIN plug to the **Comms Input** socket and the accompanying phono plug to the **D1** socket on the **slave** DSP5000.
3. Connect the other end to the **Comms Output** socket and the **D OUT** socket of the **master**.

This completes the interconnection of the DSP5000 pair. Now:

4. Locate the cable marked with ‘M5’. This is a DIN + Phono to DIN + Phono lead, about 8m long.
5. Locate the end with the single DIN and phono plug. Connect this DIN plug to the **Comms Input** socket and the phono plug to the **D1** socket on the **master**.
6. At the other end of this cable, locate the phono plug and connect it to the digital output of the CD player.

Note Getting this far should provide you with audio, and further connections will give you control of any Meridian products in your system. For connection of Meridian Comms, see page 46.

Digital audio connections

Note A digital audio connection will be made into the D1 input if you use the M5- and S5-leads supplied as directed in the section starting on page 46.

Digital audio has to be conveyed to both DSP5000s in the installation. This can be done directly from your source to each DSP5000 if

- the source has multiple outputs, *or*
- you are using a splitter device

Normally each digital audio source is connected only to the master; the signal from the selected source is then passed from the D OUT socket of the master, via the S5-lead, to the D1 socket of the slave.

Digital connections are made to the master DSP5000:

- directly from the digital outputs of up to two sources such as CD, DAT, DCC, MD, or the Meridian 604 digital FM tuner
- from the digital output of an analogue-to-digital converter such as the Meridian 607. A converter like this can be used to process the signals from all your analogue sources (for example, the output of a conventional preamplifier)
- from the digital output of a digital processor or digital control unit such as the Meridian 562 or 601
- from the digital output of a Multimedia computing device

Digital connections should be made using high-quality 75Ω screened cable. For advice on the right type of cable to use, we suggest you consult your dealer and the manual supplied with the source equipment.

Meridian has a range of suitable digital interconnects available as accessories. We advise you not to use cables intended for analogue connection, since usually these have neither the necessary degree of shielding nor the 75Ω impedance which is required. Cable intended for UHF applications (for example, antenna down-lead) is also unsuitable, since it does not shield adequately in the 1–30MHz region.

Warning We strongly recommend the use of well-screened precision coaxial cable. Certain ‘audiophile’ cables are not screened. Screened cable will minimise RF interaction with your system. Unscreened cables for digital connections may cause illegal levels of RF interference.

The DSP5000 has two coaxial digital inputs, D1 and D2. The M5- and S5-leads provided, which will be sufficient for the great majority of installations, connect to the D1 input and the D OUT output.

You will need to provide custom cables if

- you wish to use D1 **and** D2, *or*
- you are wiring a Multiroom installation, *or*
- you require cable lengths different from those provided

Communications connections

Communications connections are only made to other Meridian equipment. In general, you can follow the instructions given for the other equipment, and view DSP5000 as a D600 or D6000 for communication purposes. The following sections describe the major points.

If you have a Meridian 500-Series only system

For example; 500 or 506 CD, 562 controller, 504 FM tuner

1. Connect the analogue output of analogue sources (including) 504 to the appropriate inputs on 562
2. Connect the phono plug at the far end of the M5-lead (from the master) to the digital output of the 562
3. Locate the DIN plugs at the far end of the M5-lead (from the master). Connect one of these to the socket marked **COMMS** on the rear of the 562
4. Connect a Meridian 500 Comms lead between the second **COMMS** socket on the 562 and one of the **COMMS** sockets on the CD player
5. Connect a Meridian 500 Comms lead between the second **COMMS** socket on the CD player and one of the **COMMS** sockets on the 504
6. Configure the DSP5000 for Type 1 (see page 32)
7. Set up the 504, 500 or 506 and 562 according to their user manuals. We suggest you start with Type 1 on all units.

Caution The end of the M5-lead used to make connections with other Meridian products has two different plugs. Care should be taken to choose the correct one for the product, and not to force any connection.

If you have a Meridian 201 or 603 preamplifier and no Meridian CD player

Unless you have an older M-lead (as opposed to M5 lead) you will need to obtain an SP5 adapter. An M-lead has two DIN plugs at one end and this is the end to connect to the preamplifier. The SP5 adapter allows an M5-lead to connect to 200-Series preamplifier.

1. Connect the analogue output of the 201 or 603 to an analogue–digital converter such as the Meridian 607
2. Connect the phono plug at the far end of the M5-lead (from the master) to the digital output of the 607
3. Connect the SP5 adapter to the DIN plug at the far end of the M5-lead (from the master)
4. Locate the two added DIN plugs. Connect one of these to the socket marked **200 COMMS** on the rear of the 201, or **600 COMMS** on the 603
5. Configure the DSP5000 for Type 3 (see page 32)
6. Set up the 603 according to its user manual

If you are using Meridian 207 or 208 as your preamplifier

1. Connect the phono plug at the far end of the M5-lead (from the master) to the digital output of the CD player
2. Connect the analogue output of the 207 or 208 to an analogue–digital converter such as the Meridian 607
3. Connect a second digital audio lead (not provided) between the D2 input of the master DSP5000 and the digital output of the 607
4. Locate the DIN plug at the far end of the M5-lead (from the master). Connect it to the socket marked **200 COMMS** on the rear of the 207 or 208
5. Configure the DSP5000 for Type 2 (see page 32)

If you are using a Meridian 201 or 603 and a Meridian 200- or 600-Series CD player

Unless you have an older M-lead (as opposed to M5 lead) you will need to obtain an SP5 adapter. An M-lead has two DIN plugs at one end and this is the end to connect to the preamplifier. The SP5 adapter allows an M5-lead to connect to 200-Series products.

1. Connect the phono plug at the far end of the M5-lead (from the master) to the digital output of the CD player
2. Connect the analogue output of the 201 or 603 to an analogue–digital converter such as the Meridian 607
3. Connect a second digital audio lead (not provided) between the D2 input of the master DSP5000 and the digital output of the 607
4. Connect the SP5 adapter to the DIN plug at the far end of the M5-lead (from the master)
5. Locate the two added DIN plugs. Connect one of these to the socket marked **200 COMMS** on the rear of 207 or 208
6. Connect the other DIN plug to the socket marked **200 COMMS** on the rear of the 201**,** or **600 COMMS** on the 603
7. Configure the DSP5000 for Type 3 (see page 32)
8. Set up the 603 according to its user manual

If you have a Meridian 601 preamplifier and a Meridian 200-or 600-Series CD player

The 601 will control all analogue and digital sources.

Unless you have an older M-lead (as opposed to M5 lead) you will need to obtain an SP5 adapter. An M-lead has two DIN plugs at one end and this is the end to connect to the preamplifier and CD player. The SP5 adapter allows an M5-lead to connect to 200-Series preamplifiers.

1. Connect the phono plug at the far end of the M5-lead (from the master) to one of the 601's digital outputs – normally, use output 1
2. Connect the SP5 adapter to the DIN plug at the far end of the M5-lead (from the master)
3. Locate the two added DIN plugs. Connect one of these to the socket marked **200 COMMS** or **600 COMMS** on the rear of the CD player
4. Connect the other DIN plug to the socket marked **600 COMMS** on the 601
5. Configure the DSP5000 for Type 3 (see page 32)
6. Set up the 601 according to its user manual

If you have a Meridian 200- or 600-Series preamplifier, CD player and a tuner

Unless you have an older M-lead (as opposed to M5 lead) you will need to obtain an SP5 adapter. An M-lead has two DIN plugs at one end and this is the end to connect to the preamplifier and CD player. The SP5 adapter allows an M5-lead to connect to 200-Series preamplifiers.

1. Connect the SP5 adapter to the DIN plug at the far end of the M5-lead (from the master)
1. Connect one of the DIN plugs on the free end of the SP5 adapter to the socket marked **200/600 COMMS** on the CD player
2. Connect the other DIN plug on the M5-lead to the socket marked **CD** on the tuner
3. Use the Q-lead to connect the socket marked **200/600 COMMS** on the preamp to the socket marked **201/2** or **Preamp** on the tuner

If you are mixing Meridian 200- or 600-Series with 500-Series components

1. Connect the digital and analogue audio as described in the previous sections.
2. Locate the DIN plug at the source end of the M5-Lead. Connect it to one of the sockets **COMMS** on the rear of a 500-Series unit.
3. Connect the 500-Series communications together as described earlier and in the 500 User Guide(s).
4. Make a communications connection between one of the 500-Series and one of the 200-Series units with a CD5 lead – obtainable from your dealer. (The P-lead supplied with the 200-Series will work, but the CD5 is preferred)
5. Configure the DSP5000 and 500-Series item for 200 mode (see page 32)

If you are using no other Meridian equipment

1 Connect the DSP5000's **D1** and **D2** digital inputs to appropriate digital sources

2 Configure the DSP5000 for Type 5 (see page 32)

DO NOT, under any circumstances, connect anything other than another Meridian product to the sockets marked **Comms Input** and **Comms Output** on the rear of the DSP5000.

RS232 connection

The DSP5000 installation can be controlled directly from a computer over a standard RS232 interface.

Separate documentation and application programs are available from your Meridian dealer.

Meridian Digital Theatre

For details on connecting a Meridian Digital Theatre, or for connecting the DSP5000 with a Meridian 565 Digital Surround Processor, see the handbook supplied with 565.

Specification

Digital inputs	32kHz, 44.1kHz or 48kHz. Double PLL locks at 44.1kHz ± 120ppm
Cable inputs: **D1–2**	IEC958, 75Ω
Digital outputs	Copy of the selected input
Cable outputs: **D Out**	IEC958, 75Ω
Communications	
200-Comms	Via **Input** and **Output** connections
RS232	Standard 9-pin: 2400b, 8, N, 1 no handshake
Power Amplifiers	Complementary bipolar design, with output-stage error correction and twin loop design
Tweeter	75W mean power
Mid + Bass	75W mean power
Bass	75W mean power
Digital to Analogue conversion	18-bit Delta–Sigma converter running with 64-times over sampling
Distortion	<0.02%, typically less than 0.01% up to full power at all frequencies
Noise and hum	< –94dBr at all volume settings
Distortion	<0.02%, typically less than 0.01% up to full power at all frequencies
DSP processor	Motorola DSP56001 running at 32MHz
Acoustic	
Output	Typically > 108dB spl @ 1m
Noise	< 15dB spl @ 1m
Frequency response	In room response within 3dB, 35Hz–20kHz
Crossover	Linear-phase ±30° at 2.6kHz
Low frequency	6th-order quasi-Butterworth at 35Hz
Drive units	
Bass	2 x 160mm polypropylene high-efficiency long-throw custom drivers
Tweeter	Meridian 25mm piston in short horn: aluminium dome with silver voice-coil.
Cabinet	Constructed from fine veneered MDF
Dimensions	210 x 900 x 295mm
Weight	32 kg each
Power	100–125; 200-230; 210–250V AC 50–60Hz 20VA standby; 300VA max

Help!

Standby point not lit

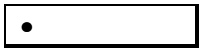
Check the following:

1. There is AC power connected to the socket on the rear of the DSP5000
2. The power switch on the rear panel of the DSP5000 is turned on

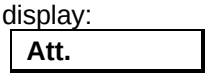
If the DSP5000 still will not light up, check any fuses in your power supply and the fuse in the DSP5000. If these are all intact, contact your dealer.

No sound

1. Check the AC power supply to DSP5000. If the power is on, you should be able to see the *Standby* display in the window:

2. Check the AC supply to the other units in the system
3. Check that the correct source has been selected, and that this source is running and producing music
4. Check that all interconnections have been made to the correct sockets
5. Check that the DSP5000 is not in Mute. If it is, you will see this display:

6. Check that the volume is set sufficiently high for audibility (say at 50)
7. If there is still no sound, reset the DSP5000 by switching the power off, waiting for 30 seconds, then switching it back on

Sound from one channel only

1. Check interconnect and speaker wiring
2. Do both displays say the same thing?

Channels reversed

Remember that for digital inputs left or right is determined at setup; see the sections on pages 33 and 34. Default conditions set the master to left.

1. If necessary re-configure; see page 34

Settings lost

1. Check the procedures set out in the section following page 30
2. Check EPROM version is 2.2 or higher, see page 16.
3. Contact your dealer

Hum

Hum is normally only to be expected with analogue sources. Check the grounding of the analogue preamplifier. See the handbook supplied with your preamplifier for help.

Clicks with digital sources

If clicks appear in the sound when the system is switched to a digital source, the two most likely reasons are as follows:

1. If clicks only occur when the source is running (playing), the problem is due to error correction or transmission failure. First check the condition of the disc or tape. If the player is a Meridian 207, 208 or 602, look for a flashing Error light. Check the integrity of the connections between the digital audio source and the DSP5000. Are you using good 75-ohm cable?

2. If clicks occur randomly with the source selected but stopped, the problem may be the result of loss of lock due to gross electrical interference. Find out whether there is an appliance elsewhere in the house causing the disturbance (e.g. central heating, a pump or a fan). If there is, suppress it.

Meridian CD does not respond

1. Check that all connections between the master speaker and the Meridian CD player have been made correctly
2. Make sure that the whole system is set up in either 200 mode or in 500 mode.

Note All Meridian products must be in the same mode. 200 or 600-Series products can only work in 200 mode and if you intend to incorporate these in a DSP5000 system, the speakers and any 500-Series components must be put into 200-mode (normally Type 2).

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3. Make sure that the DSP5000 has been set up so that this source is Comms type '1C' – see page 38.
4. Make sure that the Comms address corresponds in DSP5000 and in the CD player (normally '1A') – see page 38.

504, 204 or 604 does not respond

1. Check that all connections between the master and the 504/204/604 have been made correctly. If a 204/604 is the only other Meridian equipment in the system you will need an SP5 adapter to allow the M5-lead to connect to the socket marked **CD** on the 204/604.
2. Check that a 204 is fitted with software of an adequate level. DSP5000 requires version 204.A or later. To see the version, press **Mode** * **Set** on the front panel of the 204 when the unit is not in *Standby*. Version numbers count 1–9, then A–Y. If the software in your 204 is earlier than 204.A, your dealer will be able to obtain an up-to-date EPROM and fit it. Operating code can always be updated.
2. Make sure that the whole system is set up in either 200 mode or in 500 mode.

Note All Meridian products must be in the same mode. 200 or 600-Series products can only work in 200 mode and if you intend to incorporate these in a DSP5000 system, the speakers and any 500-Series components must be put into 200-mode (normally Type 2).

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3. Make sure that the DSP5000 has been set up so that this source is Comms type '2C' – see page 38.
4. Make sure that the Comms address corresponds in DSP5000 and in the CD player (normally '1A') – see page 38.

562, 201, 603 or 601 does not respond

1. Check that all connections have been made between the master and the preamplifier. If the preamp is the only other Meridian equipment in the system you will need an SP5 adapter to allow the M5-lead to connect to the **200/600 Comms** socket on the preamp.
2. Check that a 201 is fitted with software of an adequate level. DSP5000 requires 201.7 or later for 201MkII, or 0.4 or later for 201MkIII. To find out which version you have, follow the instructions in the manual supplied with the 201. Version numbers count 1–9, then A–Y. If the software in your 201 is earlier than 201.7, your dealer will be able to

obtain an up-to-date EPROM and fit it. Operating code can always be updated.

3. Make sure that the whole system is set up in either 200 mode or in 500 mode.

Note All Meridian products must be in the same mode. 200 or 600-Series products can only work in 200 mode and if you intend to incorporate these in a DSP5000 system, the speakers and any 500-Series components must be put into 200-mode (normally Type 2).

DSP5000s do not respond

The communications between MSR and speaker could be being interrupted by sunlight in the infra-red pickup behind the display.

DSP5000s go silent when used hard

DSP5000 has a temperature-sensing system on board that prevents overheating of the electronics by cutting out the sound. The sound will reset when they have cooled down.

When this system is activated, the display on the offending speaker will show

Hot

What **have** you been playing?

Communications not working between DSP5000 and other Meridian products

If you have this problem, check the connections carefully. The section starting on page 46 deals with this in some detail. Then check the following:

- Are you using a B-lead or P-lead instead of a B1-lead?
- Are you using a Q-lead instead of a Q1-lead?
- Are you using an A-lead with a Meridian tuner? The A-Lead is not suitable for this; you should request a B1-Lead.

If you cannot see an obvious problem, connect the Comms one product at a time. If you cannot solve the difficulty refer to your dealer, but first note the software versions fitted in all of your Meridian items.

To find out the software version for a Meridian product:

1. Press its **Display** key while it is in *Standby*. (If it does not have a display key, use a 209 remote control or refer to the manual supplied with the product).

Note your connections carefully.

Note Make sure that the whole system is set up in either 200 mode or in 500 mode.

Note All Meridian products must be in the same mode. 200 or 600-Series products can only work in 200 mode and if you intend to incorporate these in a DSP5000 system, the speakers and any 500-Series components must be put into 200-mode (normally Type 2).

Radio interference

Note DSP5000 is designed to comply with all relevant international standards concerning local-oscillator re-radiation.

Note DSP5000 is a digital audio and computing device which has been designed to very high standards of electromagnetic compatibility.

FCC WARNING: This equipment generates and can radiate radio frequency energy, and if not installed and used correctly in accordance with our instructions may interfere with radio communications or radio and television reception. It has been type-tested, and complies with the limits set out in Subpart J, Part 15 of FCC rules for a Class B computing device. These limits are intended to provide reasonable protection against such interference in home installations.

If this equipment does interfere with or suffer interference from radio or television reception, then the following measures should be tried:

1. Reorient the receiving aerial (or antenna), or route the antenna cable of the receiver as far away as possible from the DSP5000 and its cabling
2. Ensure that the receiver uses well-screened antenna cable
3. Relocate the receiver with respect to the DSP5000
4. Connect the receiver and this product to different AC outlets
5. If the problem persists, contact your dealer

EEC This product has been designed to comply with the limits set out in EN55013 and EN55020C.

REMEMBER to switch all units off before changing any connections.

Cleaning

The cabinet of the DSP5000 is finished with veneer.

The display panel is glass, and should be cleaned using a barely damp chamois leather.

Do not use abrasive cleaners on any part of the DSP5000.

The phono connectors on the rear of the DSP5000 are gold-plated, and need no cleaning if gold-plated phono plugs are used. Otherwise, we recommend that you remove and replace each plug at least once a year. A proprietary contact cleaner can be used to some advantage.

Maintenance & service

The Meridian DSP5000 has been carefully designed to give years of untroubled service. There are no user-serviceable parts inside the case, nor do the units require any form of maintenance.

In the unlikely event that your DSP5000 fails to function correctly, it should be returned, in its original packing, to your Meridian dealer. In case of difficulty, please write to the following address if you live in the UK:

Digital Gramophone & Wireless Ltd
14 Clifton Road
Huntingdon
Cambridgeshire PE18 7EJ

Outside the UK, contact the importing agent for the territory. A list of Meridian agents abroad is available from the above address.

No responsibility can be accepted for the DSP5000 while it is in transit to the factory or an agent, and customers are therefore advised to insure the unit.

In the USA and Canada, contact

Meridian America Inc.
3800 Camp Creek Parkway
Building 2400 Suite 112
Atlanta GA 30331
Tel (404) 344-7111
Fax (404) 346-7111

Guarantee

The Meridian DSP5000 is guaranteed against defects in material and workmanship for 12 months from the date of purchase.

The guarantee is void if the DSP5000 has been subjected to misuse, accident or negligence, or has been in any way tampered with or modified without the written authorisation of DGW Ltd.

Note that connecting anything other than the correct network-lead to the sockets marked **Comms Input** and **Comms Output** may cause damage to the DSP5000 which will not be covered by this guarantee. Attempted servicing by unauthorised people may invalidate the guarantee.

Labour and carriage charges are not covered unless by local agreement.

If you request service under guarantee, proof of the date of purchase will be required.

Outside the UK, local warranty liability is restricted to equipment purchased within the territory. Our agents abroad are contractually obliged to service under guarantee only equipment sold through them. They are entitled to make a non-refundable charge for any service carried out on other equipment.

This guarantee does not limit your statutory rights within the United Kingdom.

Appendix 1 DSP5000 types

Type 1 setup, Meridian 500 series system using 562

The Meridian 562 allows simple control and routing of analogue and digital sources. All connections from sources are made to 562 which then sends a single digital feed to the DSP5000s. Type 1 sets the DSP5000 as a left master, so you will need to make the other a right slave, or adjust left/right on both speakers.

Type 1			**500**	**500, 506, 508**
Remote key	**Logo**	**Input on DSP5000**	**Control?**	**Address**
CD	cd	D1	1C	1A
Radio	rd	D1	2C	1A
LP	LP	D1	NC	1A
Video	tn	D1	NC	1A
Tape 1	t1	D1	NC	1A
Tape 2	t2	D1	NC	1A
CDR	Cr	D1	1C	1A
Cable	Cb	D1	NC	1A
Text	tt	D1	NC	1A
VCR1	U1	D1	NC	1A
VCR2	U2	D1	NC	1A
LaserDisc	Ld	D1	5C	1A

Type 2 setup, Meridian CD as preamp (via 607), 204 connected

The Meridian compact disc player range includes players with built-in preamplifiers, such as the 207 and the 208. To use the analogue inputs of these units, it is necessary to put a 607 (or similar) A/D converter between the fixed output of the preamp section and the D2 input of the DSP5000. It is possible to control one of the previously mentioned CD preamp combinations and a Meridian FM tuner using Type 1. Type 1 sets the DSP5000 as a left master, so you will need to make the other a right slave, or adjust left/right on both speakers.

Type 2			**200**	**208, 207**
Remote key	**Logo**	**Input on DSP5000**	**Control?**	**Input on CD Preamp**
CD	cd	D1	1C	CD
Radio	rd	D2	2C	Line
LP	LP	D2	NC	LP
Tape 1	t1	D2	NC	Tape
Video	N	D2	NC	No change
Tape 2	N	D2	NC	No change

Type 3 setup, 601, 201, 603 or 562 as preamp via 607, Meridian CD and 204 connected

In this Type, all sources are mediated through an external control unit or preamplifier. The output of an analogue preamplifier (201 or 603) will have to be converted to a digital signal for DSP5000. A Meridian 607 converter is recommended.

The Meridian 601 preamplifier incorporates an analogue–to–digital converter for analogue sources. The 601 has very comprehensive customisation facilities, and these are covered in its manual. If you are using DSP5000 with a 601, you are advised to study the 601 user guide, bearing in mind that recommendations concerning D6000 apply equally to DSP5000.

It does not make sense to connect a Meridian CD player to an analogue-only preamplifier such as the 201 or 603. For such a connection you should use Type 4.

Type 3			**200**	**201, 601, 603**
Remote key	**Logo**	**Input on DSP5000**	**Control?**	**Input on Preamp**
CD	cd	D1	1C	CD
Radio	rd	D1	2C	Radio
LP	LP	D1	NC	LP
Tape 1	t1	D1	NC	Tape 1
Video	tn	D1	NC	Video
Tape 2	t2	D1	NC	Tape 2

Type 4 setup, 601 preamp or 201 or 603 as preamp via 607, Meridian CD and 204, CD with direct connection

In this Type, the CD player is directly connected to D1, and all other sources are mediated through an external control unit or preamplifier. The output of an analogue preamplifier (201 or 603) will have to be converted to a digital signal for DSP5000. A Meridian 607 converter is recommended.

The Meridian 601 preamplifier incorporates an analogue–to–digital converter for analogue sources. The 601 has very comprehensive customisation facilities, and these are covered in its manual. If you are using DSP5000 with a 601, you are advised to study the 601 user guide, bearing in mind that recommendations concerning D6000 apply equally to DSP5000.

Type 4				
Remote key	**Logo**	**Input on DSP5000**	**Control?**	**Input on Preamp**
CD	cd	D1	1C	CD
Radio	rd	D2	2C	Radio
LP	LP	D2	NC	LP
Tape 1	t1	D2	NC	Tape 1
Video	tn	D2	NC	Video
Tape 2	t2	D2	NC	Tape 2

Type 5 setup, Meridian 500 system not using 562

The CD is connected directly to **D1**, all other sources are routed directly or via an A/D converter to **D2**. Type 5 sets the DSP5000 as a left master, so you will need to make the other a right slave, or adjust left/right on both speakers.

Type 5			**500**	**500, 506, 508**
Remote key	**Logo**	**Input on DSP5000**	**Control?**	**Address**
CD	cd	D1	1C	1A
Radio	rd	D2	2C	1A
LP	LP	D2	NC	1A
Video	tn	D2	NC	1A
Tape 1	t1	D2	NC	1A
Tape 2	t2	D2	NC	1A
CDR	Cr	D2	1C	1A
Cable	Cb	D2	NC	1A
Text	tt	D2	NC	1A
VCR1	U1	D2	NC	1A
VCR2	U2	D2	NC	1A
LaserDisc	Ld	D2	5C	1A

Type 6 Meridian Digital Theatre

Type 6 has inputs like Type 1. The main differences selected in Type 6 are:

- Balance control set to ‘no’
- Centre-channel choice set ‘yes’

Type 7 Second room in Multiroom system

Type 7 has inputs like Type 1. In Type 7 the volume option is set to 2.

Type 8 Additional room in Multiroom system

Type 8 has inputs like Type 1. In Type 8 the volume option is set to 3.

Appendix 2 *Test* mode

Test mode is not recommended for everyday use. As its name suggests, however, it is very useful for testing the installation and the speakers.

The main advantages of *Test* mode are that you can directly display which of the DSP5000's physical inputs has been selected, and that entering or leaving this mode does not change any of the programming you may have done previously.

1. Switch on the power supply to the master speaker only while continuously pressing the **Next** key on the MSR. The speaker will display

   1L 65

   and the red light will be on.

2. Switch the power off. You have now set the test master.
3. Switch on the power supply to the slave speaker only while continuously pressing the **Previous** key on the MSR

   1L 65

4. Switch the power off. You have now set the test slave.

If you now turn both speakers on, they will come up in *Test* mode.

To get back to normal user mode:

1. Switch on the power to each speaker with the **Clear** key pressed

Controls

Test mode				
Remote key	**Logo**	**Input on DSP5000**	**Control?**	**Channel selected**
CD	1L	D1	No	Left
Radio	1r	D1	No	Right
LP	2L	D2	No	Left
Tape 1	2r	D2	No	Right

Appendix 3 *Calibrate* mode

WARNING: THIS MODE MAY CHANGE THE RESPONSE OF YOUR SPEAKER, AND SHOULD ONLY BE USED BY A QUALIFIED SERVICE ENGINEER.

The process of calibration is carried out during production; it alters the level of tweeter to compensate for the variability found in drive units. It should therefore only be used if a drive unit needs to be replaced.

The calibration levels are noted on the back panel.

To enter *Calibrate* mode:

1. Switch on the power supply to the speaker while pressing the **Repeat** key on the MSR

The calibration display looks like the *Test* mode display (see Appendix 2):

1L 65

This shows that you are in *Calibrate* mode and that the volume level is 65.

This mode operates like *Test,* but two menus are enabled.

Controls

***Test* mode**				
Remote key	**Logo**	**Input on DSP5000**	**Control?**	**Channel selected**
CD	1L	D1	No	Left
Radio	1r	D1	No	Right
LP	2L	D2	No	Left
Tape 1	2r	D2	No	Right

Internally generated test signals

A number of internally generated test signals are available in *Calibrate* mode. These include:

- one sample width impulse with 2Hz repetition rate
- four sample width impulse with 2Hz repetition rate
- pink noise

To switch from the input to the test signals:

1. Press the w or e **menu** key until you see a display like this:

   OFF

indicating that signal generation is off.

2. Press the n or s **menu** key to move between a narrow impulse, a wide impulse and pink noise, with these displays:

   thin
   FAt
   PIn.

To set the relative level of the tweeter:

1. Press the w or e **menu** key until you see a display like this:

   G. 0.0

indicating a relative setting of 0.0dB

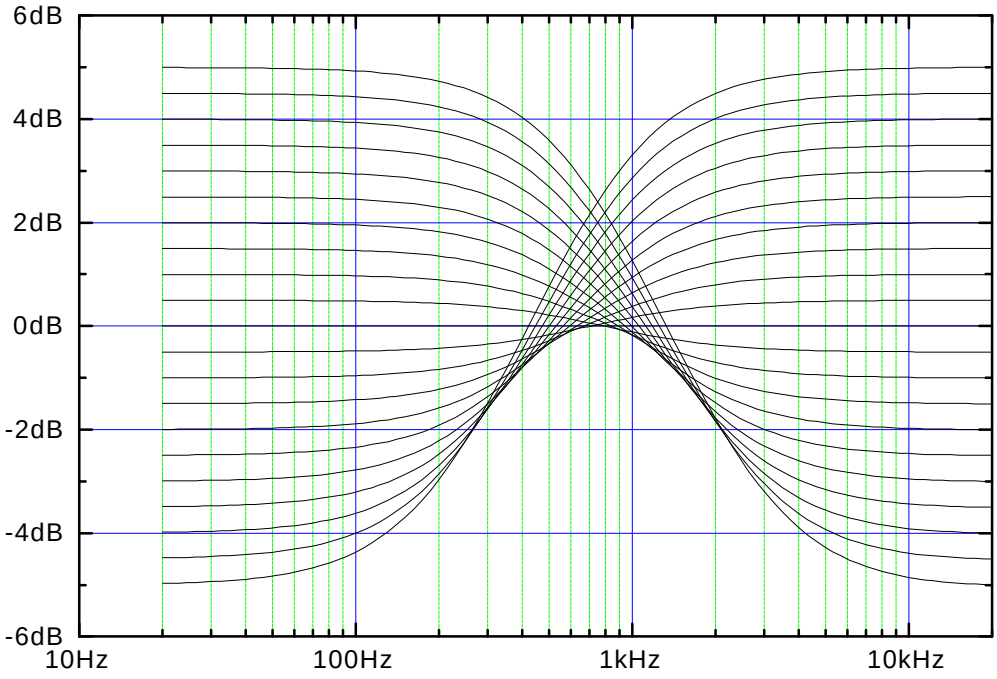
2. Press the n or s **menu** key to move in 0.5dB steps over the range ±3.5dB

Getting out of *Calibrate*

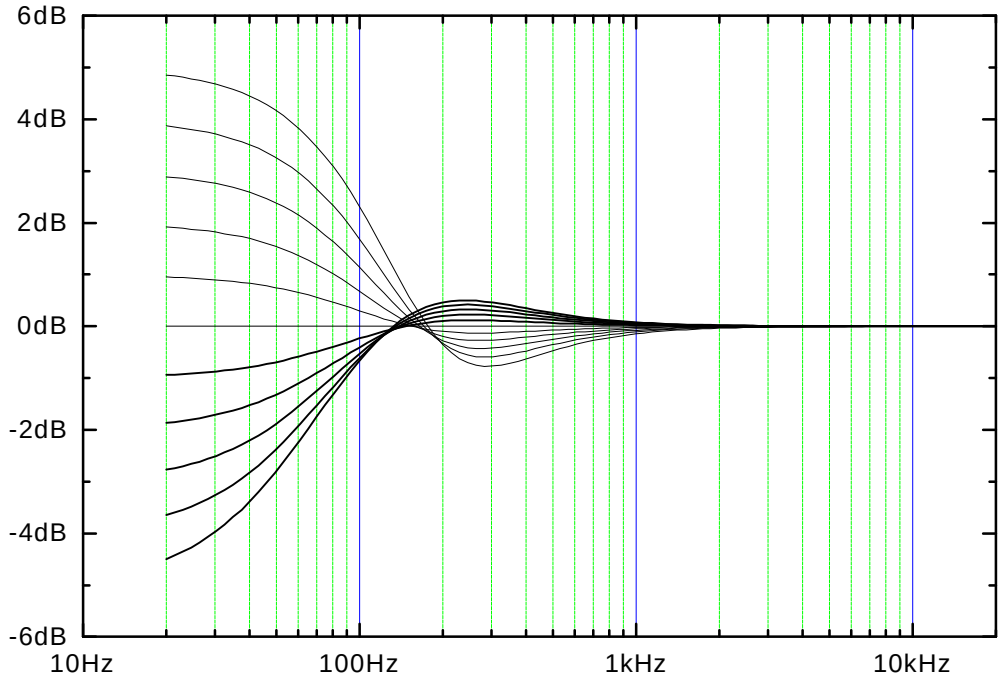
Once calibration is compete, switch the DSP5000 off and then on again while pressing **Clear**.

This should bring you back into the normal playing state.

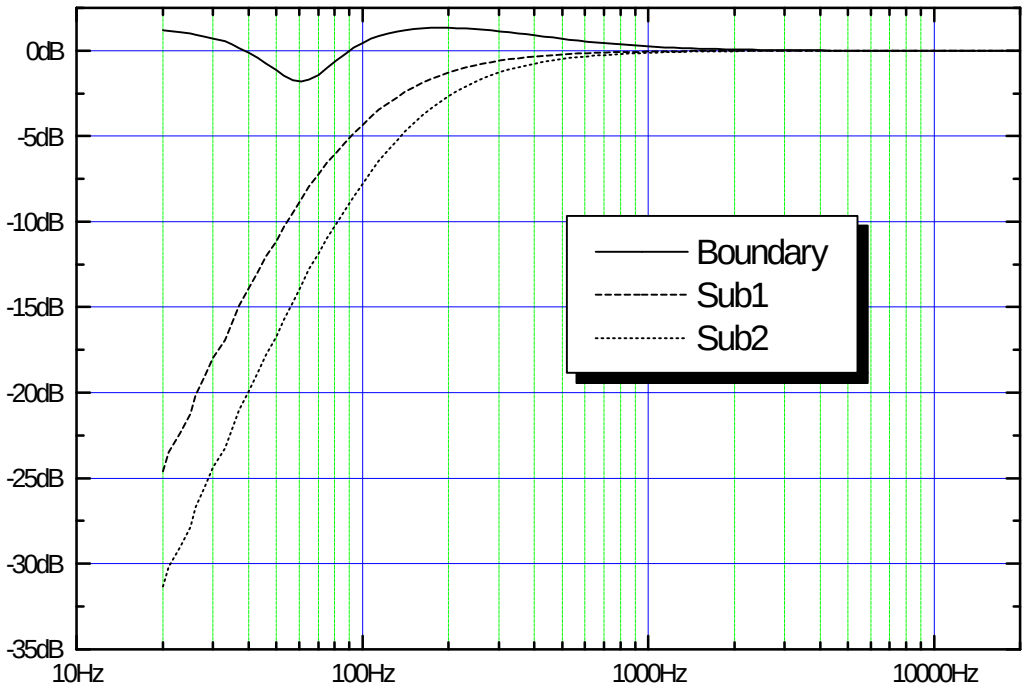
Appendix 4



Tilt control responses, showing the steps between +10 and –10



DSP5000 bass control, showing 1dB steps between +5 and –5



Relative response of the 'boundary' and subwoofer settings

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